

# RESULTS OF THE 1966 CHENEY EXPEDITION TO THE SAMBURU DISTRICT, KENYA. ORNITHOLOGY

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**ABSTRACT:** The 1966 Cheney Kenyan Expedition was organized and lead by Mr. William J. Cheney, whose primary goal was to collect a pair of leopards for an exhibition group in the Museum. The choice of locality was determined by this consideration, but as the area visited is one that has been little studied, the birds collected help to fill gaps in the distributional data on many of the included species. Some 151 species and subspecies were obtained, and are reported on in this paper.

The 1966 Cheney Expedition of the Los Angeles County Museum of Natural History worked in the Samburu District of the Northern Frontier Division of Kenya. The region was selected as a likely place in which to obtain a pair of leopards needed for an exhibition group, and of considerable interest ornithologically as well. The expedition succeeded in its chief objective, and not only assured the Museum a fine habitat group of leopards but also obtained a pair of the relatively little known aardwolf. This will give the Museum the opportunity to create a habitat display of this rare animal, a quite unexpected addition to our African exhibits.

The expedition departed from Nairobi, Kenya, on June 1, 1966, and travelled north to the Samburu District by way of Fort Hall, Nyeri, Rumuruti and Suguta Marmor. Camp was established at the west base of the Karissia Hills, approximately 10 miles southeast of Maralal, on June 1, 1966, (Fig. 1). The camp was located at Bauwa in the Lorogi forest at an elevation of 6,500 feet, and the expedition collected in this area from June 2 through June 20. On June 21 the expedition moved camp to the west base of Mt. Nyiru (Fig. 1) and collecting continued in that area from June 21 through June 27. On June 28, 1966, the expedition returned to Maralal and then on to Nairobi, arriving there on June 30, 1966.

Expedition personnel consisted of William J. Cheney, sponsor; Kenneth E. Stager, ornithologist; Peter Saw, professional hunter (Monty Brown Safaris) and his African staff of thirteen men. One trained specimen preparator was provided by Mr. John G. Williams of Nairobi.

For kindly comparing one puzzling specimen with material in the large van Someren collections in the Field Museum of Natural History, grateful acknowledgment is made to M. A. Traylor of that institution. The main acknowledgment the Museum wishes to make is to the generous sponsor and

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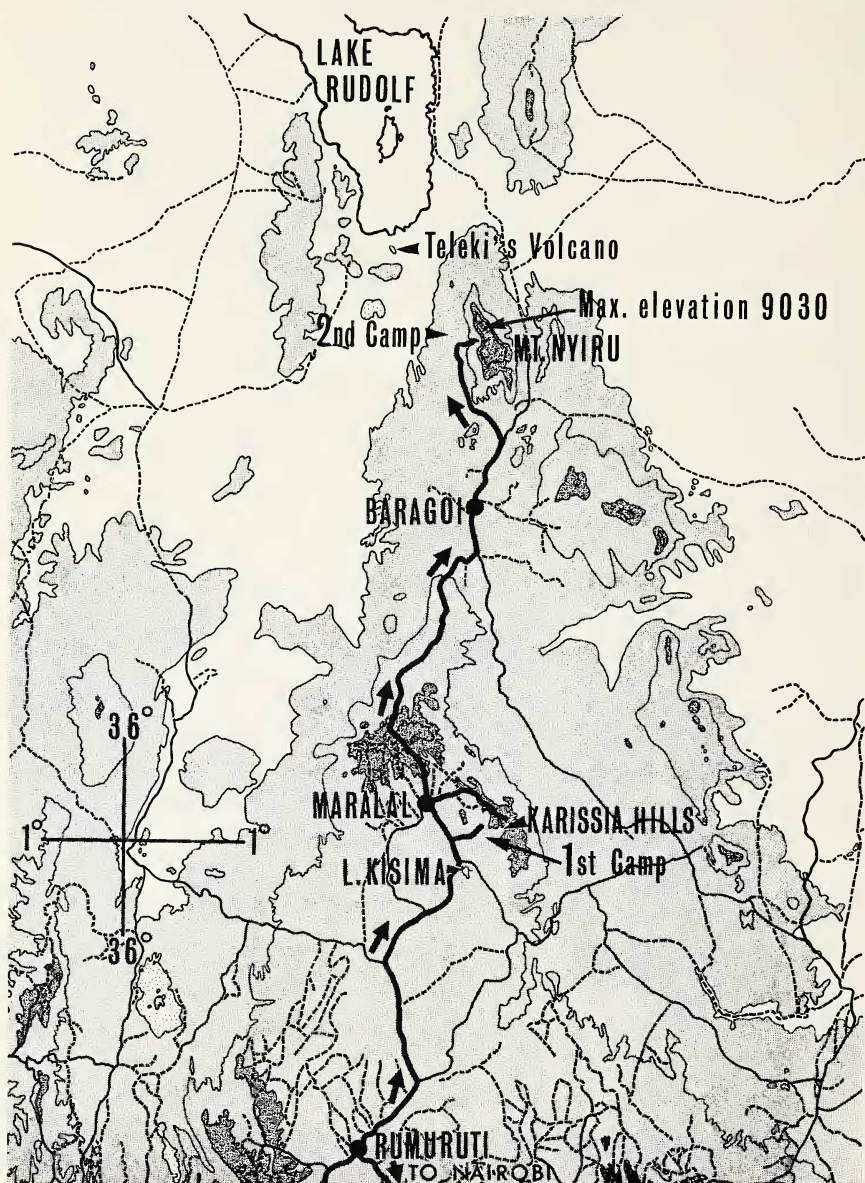


Figure 1. Map of the Samburu District, Kenya, showing collecting localities.

leader of the expedition, Mr. William J. Cheney, a long time friend and benefactor of the Museum. He made possible the trip, the results of which have enriched the Museum and have contributed to the advancement of our knowledge of the bird life of a seldom visited portion of eastern equatorial Africa. Mr. Cheney and his mother, Mrs. Eva Cheney, not only assumed the cost of the expedition but also provided the funds for the publication of this report on its work.

Thanks are due the Chief Game Warden of Kenya, Mr. David W. J. Brown, for the granting of the official permits necessary for the accomplishment of our goals. Special thanks are due Major R. T. Elliott, Divisional Game Warden, Northern Frontier Division, Maralal, for his hospitality and assistance to the expedition while it was working in his administrative area.

The junior author made the present collection, supplied the field notes and the photographs used in this paper. The senior author is responsible for the identifications, systematic notes, and the brief historical introduction. Each of the two authors read and approved the parts written by the other.

The present collection is the most extensive yet reported from the area, and, as such, fills in locality records for many species. As might have been anticipated, these provide no surprising extensions of known ranges, but are briefly presented in this paper as supplemental to previously published data.

The first explorers to traverse the area with which this report is concerned were the party of Count Samuel Teleki, who (1887-1888) proceeded northwards from Kilimanjaro, past Mt. Kenya, and up along the eastern side of the Rift Valley, eventually discovering Lakes Rudolf and Stefanie. The count's companion, Ludwig von Höhnelt, published in 1894 a two volume narrative account of this trip, but it contains only a few casual references to the birds seen or collected. No specimen records of Teleki's or Höhnelt's are extant so far as published evidence goes, if, indeed, any were collected.

In 1912 the Childs Frick expedition, with Edgar A. Mearns as chief collector, skirted the eastern edge of the area on its way south from Ethiopia to central Kenya and to Nairobi. They collected assiduously in the areas southeast of Lake Rudolf, recording 17 species in one day on the southern slopes of Mt. Nyiru (called Nyero Mts. on its labels), others at South Horr, just to the east of Mt. Nyiru, and still others in the Indunumara and Endoto Mountains; all in about 10 days in July, 1912. Its material was included in the detailed, complete report on its entire traverse of Ethiopia and Kenya, by Friedmann (1930, 1937).

One other collection, never published on and of unknown size and coverage, was made in the Samburu district in 1911-1912 by A. B. Percival, then of the Kenya game department. In all probability, Percival collected only casually while passing through the area. Jackson (1938, pp. 880, 901, 1311, 1342) lists four species of birds taken by Percival on Mt. Nyiru: *Stelgidocichla latirostris eugenia*, *Dioptrornis fischeri*, *Zosterops virens kaffensis*, and *Cin-*





*Figure 2.* Forest cover in vicinity of expedition camp at the southwest foot of the Karissia Hills, N.F.D., Kenya, June 1966.



*Figure 3.* Forest cover on the crest of the Karissia Hills, N.F.D., Kenya, June 1966.





*Figure 4.* View of the west face of Mt. Nyiru from the vicinity of the expedition camp at Tum. June 1966.



*Figure 5.* View of plains area to the west from the base of Mt. Nyiru, in the vicinity of Tum. June 1966.

*nyris mediocris mediocris* (nomenclature given as in Jackson's book). Of these the bulbul and the sunbird are not represented in the present collection. *Dioptornis fischeri* is the same as the *Malaenornis chocolatina fischeri* of this paper, and *Zosterops virens kaffensis* is probably our *Zosterops senegalensis jacksoni*.

Although much ornithological work has been done in the Mt. Kenya area and along the Northern Guaso Nyiro River, to the south of our present region, by van Someren, Lönnberg, and others, and at Marsabit to the north of it, no collections other than of casual, odd specimens appear to have been made in the Samburu District.

In our treatment of the birds collected we have followed for the most part the most recent check list of C. M. N. White as far as nomenclature is concerned. Where we have thought it called for, we have recorded taxonomic comments and observations not necessarily in complete accord with White's conclusions. In this way it is hoped that the present list may be used most easily by other students of East African birds.

## ANNOTATED LIST OF SPECIMENS

### FAMILY PODICIPEDIDAE

#### *Podiceps ruficollis capensis* Salvadori

The African little grebe is widely distributed from Senegal to Ethiopia, south to South Africa, wherever there are lakes or permanent streams. One adult male, with somewhat enlarged gonads, in good breeding plumage, was collected in the Karissia Hills on June 19. The locality is an addition to previously reported occurrences, but does not extend the known range of this bird. Several grebes of this species with downy young were observed on the reservoir formed by the dam across the stream at Bauwa in the Karissia Hills between June 5 and 20.

### FAMILY ARDEIDAE

#### *Egretta intermedia brachyrhyncha* (Brehm)

The African yellow-billed egret is represented by one specimen, an adult female, with slightly enlarged ovary, collected at Lake Kisima on June 17. This is a new, but not surprising, locality record for this bird.

### FAMILY ANATIDAE

#### *Alopochen aegyptiaca* (Linnaeus)

The Egyptian goose occurs throughout most of Africa. An adult male was obtained in the Karissia Hills on June 14. A common species at Bauwa in the Karissia Hills where one pair with five downy young were noted on June 15. Numerous on Lake Kisima on June 17.

*Anas sparsa leucostigma* Rüppell

The African black duck was met with in the Karissia Hills, where a male was collected on June 9. This bird is in an advanced stage of molt; it has lost all of its old remiges and the new ones are just sprouting, leaving the bird entirely incapable of flight. This duck is found chiefly in wooded streams in the uplands of Kenya, where it is apt to remain hidden in the vegetation along the banks. This causes it to seem less numerous than it probably is.

*Anas erythrorhynchus* Gmelin

The red-bill is one of the commonest of east African ducks. Three specimens in good plumage were collected as follows: Karissia Hills, June 9, one adult male; 15 miles south of Maralal, June 17, one adult of each sex.

## FAMILY ACCIPITRIDAE

*Aegypius tracheliotus* (Forster)

An adult female weighing 14 lbs. (6.36 kg.) was obtained on the open plains area, 10 miles south of Maralal, on June 9, 1966. On June 10, 1966, an adult male weighing 16 lbs. (7.26 kg.) was secured in the same general area, 15 miles south of Maralal. Neither bird showed any evidence of being in breeding condition.

It is questionable whether *Aegypius* and *Torgos* are congeneric as held by White, but for the present we will go along with this arrangement. There are many basic differences between *Torgos* and *Aegypius*, including the size and conformation of the brain.

The ratio of numbers of these large lappet-faced vultures to other vultures in the Maralal-Mt. Nyiru area was noted to be roughly one pair of the former to any large assemblage of vultures at a kill.

*Trigonoceps occipitalis* (Burchell)

Two specimens, one of each sex, of the white-headed vulture were obtained in the plains area at the south end of Mt. Nyiru, on June 23, 1966. The two are quite dissimilar, as the adult female has the large inner secondaries and broad edges on the median upper wing coverts white, while the subadult male has the inner secondaries dark silvery grayish and has largely lost the pale edges of the coverts through abrasion. Each of the above specimens weighed 10 lbs. (4.54 kg.).

This vulture is generally stated to be relatively uncommon although widely distributed throughout the drier portions of Kenya (Jackson 1938: 139; Lonnberg, 1911: 54). Sharpe (1931: 10) found it on Marsabit Mountain; Mt. Nyiru seems to be a new, if not a surprising locality for this bird.

White-headed vultures were frequently observed in the Karissia Hills-Maralal area, but no specimens were collected. The relative abundance of this species of vulture in the area was approximately one pair per gathering of



vultures at a given kill. Each time a zebra was killed for leopard bait in the Maralal area, a pair of *Trigonoceps* and a pair of *Aegyptius* would join the throngs of *Gyps*.

*Gyps bengalensis africanus* Salvadori

Two specimens, representing two very different plumages, of this vulture were collected 10 miles south of Maralal, June 9, 1966, an adult female (weighing 10 lbs. or 4.54 kg.) and an immature of the same sex (7 lbs. or 3.18 kg.). In treating the African white-backed vulture as a race of the Asiatic *bengalensis* we are following White (1965: 41). This is a common vulture throughout Kenya and its occurrence near Maralal, though not previously reported, is not unexpected.

White-backed vultures are exceedingly common in the Maralal area and, combined with Ruppell's griffon, make up the bulk of the vulture population of northern Kenya. It was interesting to note that these gregarious vultures have apparently become conditioned to the food opportunities afforded by hunting safaris, as large numbers of vultures will follow above and behind a hunting vehicle heading out across the plain. When the vehicle stops, the vultures will begin circling above in soaring flight. A hunter with rifle moving out from the vehicle on foot will cause many of the circling birds to begin their descent, apparently in anticipation of immediate food.

*Gyps ruppellii ruppellii* Brehm

An adult male weighing 12 lbs. (5.45 kg.) was obtained on the open plains area, 10 miles south of Maralal, on June 9, 1966.

Ruppell griffons are extremely common in the Maralal-Mt. Nyiru plains areas. Their numbers were roughly equal to those of the preceding species, *Gyps bengalensis*.

*Necrosyrtes monachus* (Temminck)

The hooded vulture is represented in the collection by an adult male taken in the Karissia Hills, June 17, 1966. It had small testes, and is in fairly abraded plumage; this is especially true of the retrices and inner greater upper wing coverts. In using a binomial for this bird we follow C. M. N. White (1965: 42), who pointed out that the change in size of these birds from the smallest West African examples to the largest East and South African ones is so gradual that it is difficult to know where, if at all, to draw a line. It is true that Mackworth-Praed and Grant (1957: 137) consider the eastern and southern birds as forming the race *pileatus*, to which the present example would belong. The hooded vulture is one of the commonest species of its group in many areas of Kenya.

Although White (1965) considers *Necrosyrtes* and *Neophron* to be congeneric, we hold that *Necrosyrtes* should be retained as a valid genus, as it differs very profoundly from the Egyptian vulture. Cranial casts of the brain

of the two genera show them to differ decidedly in shape. The external nares of *Necrosyrtes* are not nearly as large as those of *Neophron*. There are many differences in plumage texture and composition between the two forms. In *Necrosyrtes* the feathers of the occiput and nape are short and velvet-like while those of *Neophron* are narrow, elongate and pointed. The chest of *Neophron* is covered with normal contour feathers while in *Necrosyrtes* a pronounced crop patch is developed with a prominent border of white down feathers. The tail of *Neophron* has a sharply graduated tail of 14 feathers while that of *Necrosyrtes* is almost square with 12 feathers.

Hooded vultures were well represented in all large vulture gatherings in the Maralal–Mt. Nyiru plains areas and several birds were always to be found about our camp areas, in the company of tawny eagles (*Aquila rapax*). Perching in the trees about the periphery of the camps, these scavengers were always on the alert for carcasses discarded during specimen preparation.

*Neophron percnopterus percnopterus* (Linnaeus)

One adult male Egyptian vulture was obtained in the plains at the west foot of the Karissia Hills, June 12, 1966. This species is chiefly a bird of the interior highlands along the Rift Valley in Kenya. Although a common bird in many parts of East Africa, the Egyptian vulture proved to be the least common of the six species of vultures encountered in the Maralal–Karissia Hills area.

*Circaetus cinereus* Vieillot

An adult female brown harrier eagle was collected on the west base of Mt. Nyiru, June 23, 1966. It was in non-breeding state, with small ovary, and was in fairly worn plumage. Jackson (1938: 190) gave a previous record from the Samburu district, but stated that the species is rather rare in the interior of Kenya. This individual was the only *Circaetus* observed during the course of the field work. In flight the bird appeared perfectly normal, but examination of the sternum showed evidence of a previous injury that had resulted in extensive fracturing and subsequent mending of the bone tissue.

*Accipiter badius sphenurus* Rüppell

This small hawk is represented by one adult female, taken at the west base of Mt. Nyiru, June 23, 1966. The bird was in non-breeding condition, and in good plumage.

*Melierax poliopterus* Cabanis

The pale chanting goshawk was met with on June 24, on the west base of Mt. Nyiru, when one adult male and two adult females, all with small gonads, were collected. These three are definitely *poliopterus*, but the male has a very few dusky cross bars on the white upper tail coverts, suggesting a variation in the direction of the related and sympatric *M. metabates*. Similarly, one of the females shows some freckling on the inner webs of a few of the upper wing

coverts, but nothing like the degree to which this character is developed in *M. metabates*. Chanting goshawks were not met with in the Karissia Hills area, but observations were made on the harrier hawk, *Polyboroides typus*. A single individual of this species was observed in flight, vigorously pursued by large numbers of glossy starlings of several species. Disregarding the starlings, this large hawk was repeatedly observed to raid the nesting colonies of the grey-headed social weaver (*Pseudonigrita arnaudis*). The hawk was observed to grasp the nest in its talons and pull it apart by hanging upside down and beating the air with its wings. Frequent movements of the hawk's head towards the nest were made, but observations was too distant from the scene of predation to note whether or not any adult or nestling weavers were taken.

*Buteo rufofuscus augur* (Rüppell)

The augur buzzard is represented by two adult specimens, a female taken in the Karissia Hills, June 9, and a male taken 5 miles west of Maralal, June 15. Both birds were in non-breeding state, with small gonads. This is a common, widely distributed bird in the interior of Kenya and numerous individuals were observed in the Maralal area.

*Aquila rapax belisarius* (Levaillant)

Two examples of the tawny eagle were obtained, as follows: 15 miles south of Maralal, June 12, one female in the "usual" grayish tawny plumage; Karissia Hills, June 18, one adult male in the dark plumage phase. The female is in very worn plumage. As was shown in a detailed account of the plumage stages and phases of this eagle by Friedmann (1930: 58-62), the very dark birds are the oldest ones, possibly 5 or 6 years old. The present male is very dark on the head, throat, and breast; less so on the wings and upper parts of the body, but still dark, and dark tawny brown on the abdomen.

The tawny eagle is the commonest eagle in the interior of Kenya, where it is fairly well distributed. The present specimens add new, but not surprising, locality records for it. Tawny eagles proved to be great scavengers about our field camps, where they took up residence and fed on the discarded bird carcasses cast out each day. As many as eight individuals of this species were noted at one time at the Karissia Hills camp and always in the company of hooded vultures (*Necrosyrtes monachus*).

FAMILY PHASIANIDAE

*Francolinus sephaena grantii* Hartlaub

Grant's crested francolin is a common, widely distributed bird of the open country of eastern Africa from southern Sudan and Ethiopia to central Tanzania. Two specimens were procured by the expedition, a non-breeding female in the plains area 15 miles south of Maralal, June 4, and a breeding male in the Karissia Hills, June 12.



*Francolinus leucoscepus infuscatus* (Cabanis)

The yellow-throated francolin occurs over much of the open, drier parts of eastern Africa from Ethiopia to Tanzania. A female collected 15 miles south of Maralal, June 7, and a male in the same place June 15. Both birds were in full breeding condition; the hen was marked as "laying." The male is larger and more deeply colored, with dark mahogany brown on the ventral feathers; the female has the white shaft streaks on the feathers of the upper part broader and the malar band of feathers less lined with dusky gray; otherwise the two are alike.

*Coturnix delegorguei delegorguei* Delegorgue

Two females of the wide-ranging harlequin quail were collected, one on June 7, 15 miles south of Maralal, and the other on June 11, in the Karissia Hills. Both birds had slightly enlarged ovaries; both are in fresh plumage.

## FAMILY OTIDIDAE

*Eupodotis ruficrista gindiana* Oustalet

The buff-breasted florican was met with at the west base of Mt. Nyiru, on June 25, when one female was collected. The bird had the ovary slightly enlarged. Mt. Nyiru is a new locality for this bird, and while not extending its known range, helps to fill in the still imperfect data on its occurrence.

## FAMILY BURHINIDAE

*Burhinus capensis maculosus* (Temminck)

The South African dikkop ranges from the Cape Province north to Kenya, changing in northern Kenya to a tawnier race *maculosus*. Two male specimens obtained in the Karissia Hills, June 11 and 12, belong to the race *maculosus*, which had been recorded previously from Horr, Marsabit, and other localities not too far from the Karissia Hills. Both specimens are somewhat abraded, and both were in non-breeding condition.

## FAMILY CHARADRIIDAE

*Vanellus armatus* (Burchell)

One adult male blacksmith plover was collected 15 miles south of Maralal, June 6. It is in slightly abraded plumage, and shows signs of molt in the tail, the outermost rectrices being only an inch in length and still enclosed basally in their sheaths. The bird had the testes somewhat enlarged. Maralal must be about the northern limit of the range of this plover; Jackson (1938: 355) considered it to occur only in southern Kenya, south to Natal, and gave no locality record north of Naivasha, Elmenteita, and Nakuru. Mackworth-Praed and Grant (1957: 358) wrote that in Kenya it was most abundant in the Rift Valley, and noted its breeding there from April to August. The

present specimen, judging by its plumage and by its gonadal state, was probably through breeding, and was therefore one of the early breeders.

We follow White (1965: 120) in considering the genus *Hoplopterus*, formerly used for this bird, as part of *Vanellus*.

*Vanellus coronatus coronatus* (Boddaert)

The crowned lapwing, a common bird of the fairly dry, short grass area of Kenya, was collected in two localities. On June 10 an adult male, with somewhat enlarged gonads, was taken 15 miles south of Maralal; on June 12 another male and a female with large ovarian eggs were collected in the open plains at the foot of the Karissia Hills. All three specimens are in somewhat abraded plumage. This species was formerly placed in the genus *Stephanibyx*, which White (1965: 122) later considered as part of the broader group *Vanellus*.

*Charadrius pecuarius pecuarius* Temminck

Kittlitz's sand plover is a widely distributed bird over much of Africa, in dry open places. The expedition obtained one adult male, with enlarged testes, at Lake Kisima, on June 17. The specimen is in abraded plumage.

*Charadrius tricollaris tricollaris* Vieillot

The three-banded plover is a common bird of the mud flats, beaches, and open areas near water, throughout much of Africa. It is represented in the present collection by the following three specimens: June 4, Karissia Hills, one female with slightly enlarged ovary, one male with enlarged testes; June 6, plains area 15 miles south of Maralal, one female with enlarged ovary.

FAMILY GLAREOLIDAE

*Cursorius temminckii* Swainson

Temminck's courser is a bird of the open, short grass country throughout Kenya. On June 4, two specimens, one of each sex, were obtained in the plains area 15 miles south of Maralal; both birds were in breeding condition.

FAMILY COLUMBIDAE

*Columba guinea guinea* Linnaeus

One adult male speckled pigeon, with considerably enlarged testes, was obtained at the west base of Mt. Nyiru on June 26. This is a bird of the open country where it goes about in small flocks. According to Peter Saw, the professional hunter with our field party, the speckled pigeon is known to form fairly large flocks in the Mt. Nyiru area where it is often sought as a game bird by hunting safaris.

*Streptopelia lugens lugens* (Rüppell)

This dark pigeon is represented by two specimens in the collection; an

immature female taken in open plains country 15 miles south of Maralal, on June 10, and a non-breeding adult male collected in the Karissia Hills, June 11. White (1965: 156) considered this pigeon to be a bird of montane forests, but the present immature female, found in open country, suggests a broader ecological range of habitat for it.

*Streptopelia semitorquata* (Rüppell)

In naming the specimens of the red-eyed dove binomially we are following White (1965: 156-157) who found the proposed races were not well enough differentiated for separate recognition. Three examples were collected by the expedition, all in the Karissia Hills, a female with small ovary on June 3, another with somewhat swollen ovary on June 14, and a male in breeding condition on June 4.

*Streptopelia senegalensis senegalensis* (Linnaeus)

The laughing dove, a widely distributed and common bird over much of Africa south of the Sahara, except in forested areas, was met with on the west base of Mt. Nyiru, where an adult male with greatly enlarged testes was collected on June 26.

*Oena capensis* (Linnaeus)

This long-tailed little dove is represented by one specimen, an adult female with slightly enlarged ovary, taken at Lake Kisima on June 17.

*Turtur tympanistria* (Temminck)

The tambourine dove occurs throughout Kenya in wooded areas. The expedition obtained an adult male in breeding condition in the Karissia Hills on June 10. We follow White (1965: 161) in treating this bird binomially.

*Turtur chalcospilos* (Wagler)

The emerald spotted dove is a woodland bird of very wide distribution in Africa. Three specimens were obtained, as follows: Karissia Hills, June 8, one adult male with enlarged testes; west base of Mt. Nyiru, June 22, one adult of each sex with somewhat enlarged gonads.

FAMILY MUSOPHAGIDAE

*Tauraco hartlaubi* (Fischer and Reichenow)

Hartlaub's turaco is a bird of the highland forests of central and southern Kenya, eastern Uganda, and northern Tanzania. It has been found as far north as Marsabit Mountain (Sharpe, 1931: 99). Judging by the fact that the expedition obtained six specimens in the Karissia Hills, June 2 to 14, the bird must be as common there as it is on Marsabit and on Mt. Elgon. Five of the specimens are females, none in breeding condition and one of them a young bird, and the remaining one is an adult male with somewhat enlarged testes.



Turacos with a call similar to that of *T. hartlaubi* were heard on the steep, heavily-forested slopes of Mt. Nyiru, but no specimens were secured.

*Corythaixoides leucogaster* (Rüppell)

The white-breasted go-away-bird is a denizen of the open, semi-arid plains and scrub country of Kenya. On the west base of Mt. Nyiru, June 21 to 25, a series of 3 adult males and 2 adult females was collected. Some of them showed gonadal enlargement while others did not. A common species in the area about our Mt. Nyiru camp.

FAMILY CUCULIDAE

*Cuculus solitarius solitarius* Stephens

The red-chested cuckoo was met with in the Karissia Hills, where a non-breeding female was taken on June 12 and a male, with slight gonadal enlargement, on June 15. The female shows signs of active molt in the remiges, and has many worn feathers on the upperparts; the male shows no sign of ecdysis.

Pitman (1964: 140) recorded an egg of this cuckoo taken at Baragoi, about 50 miles north of the Karissia Hills, on December 20.

*Cuculus clamosus clamosus* Latham

The name of the black cuckoo is once more *clamosus* since *cafer* Lichtenstein has ruled a *nomen rejectum* by the International Commission on Zoological Nomenclature. The expedition collected an adult male, with some testicular enlargement, in the Karissia Hills, June 19. The fact that this bird, not a breeder but also not a migrant, judging by its testes, was collected at the same place and within a fortnight of the specimens of the next form, adds to, rather than clarifies the puzzling nature of the inter-relations of these cuckoos. This specimen has one very worn outer rectrix, apparently left over from an earlier plumage.

*Cuculus clamosus gabonensis* Lafresnaye

White (1965: 184) has combined *jacksoni* and *mabirae* with *gabonensis*, and we call our specimens by the last name to conform with his check list. However, it is not yet clear whether this is the correct solution of a puzzling series of bird plumages. The detailed discussion in earlier studies (Friedmann, 1930: 263-266; Chapin, 1939: 192) and the uncertainty expressed by Jackson (1938: 488-489) make it advisable to point out that if further study with additional specimen data should necessitate rearranging the birds presently grouped together as *gabonensis*, and should reinstate some of the races, formerly recognized, our present examples would be *jacksoni*. They lack the pale ground color on the abdomen found in typical *gabonensis* and *mabirae*. Three examples, all males, and all like the type of *jacksoni*, were obtained on June 3 in the Karissia Hills. All had small testes and all are fairly similar, although

varying in the darkness of the ventral barrings and in the width of the white bars on the under tail coverts.

*Chrysococcyx cupreus cupreus* (Shaw)

The yellow-bellied emerald cuckoo occurs, chiefly in forest but also in scrub, country, throughout eastern Africa. Two adult males, both with somewhat enlarged gonads, were collected in the Karissia Hills on June 15. The Karissia Hills are a new, but hardly surprising, locality record for this bird. We are following White (1965: 187) in considering *sharpei* a synonym of *cupreus*, although his action is subject to reconsideration, as the majority of previous authors considered the two distinct.

*Centropus superciliosus superciliosus* Hemprich and Ehrenberg

One adult female white-browed coucal was obtained at Pali Pali Hill, south of Karatina, June 1, when it was hit by the car. This terrestrial cuckoo is a common and widely distributed bird over much of Kenya. The above mentioned specimen was secured enroute to the Samburu district, but the species was not encountered in either of our collecting areas.

FAMILY STRIGIDAE

*Bubo lacteus* (Temminck)

Verreaux's eagle owl is represented in the collection by an adult female, taken in the Karissia Hills, on June 2. Its stomach contents showed it had been feeding on large coleoptera, a strange diet for so large an owl. Other observers have recorded snakes and lizards, but also caterpillars as parts of its usual food. The Karissia Hills adds a new "station" for this large owl. The above mentioned specimen was one bird of a pair that roosted in the large fever trees in the immediate vicinity of the Karissia camp.

FAMILY CAPRIMULGIDAE

*Caprimulgus frenatus* Salvadori

White (1965: 204) treated *frenatus* as a full species and not as a race of *pectoralis*, and we are here following his decision. Two specimens are referred to this nightjar, an adult "female" taken in the Karissia Hills, June 12, and another female in the same place on June 4. The first specimen may be wrongly sexed, as it has the large remigial spots pure white, untouched with buffy, and has very broad white terminal areas on the outer rectrices. The other specimen has the remigial spots tinged with rusty buff and has no white tips to the rectrices, the terminal portions of which feathers are grayish sandy buff mottled and blurred with fuscous. The bird assumed to be a male agrees very closely with an undoubted male from "Mile 40" on the Nairobi-Magadi Road; the other fits very well with a female from Nairobi but has the terminal area of

the outermost pair of rectrices more clouded and mottled with fuscous, less plain sandy buff than the Nairobi bird. The descriptions of the female plumage given by Mackworth-Praed and Grant (1957: 667) and by Jackson (1938: 651) do not fit the present female, as they state that the terminal white tail areas are present in both sexes; but in this they seem to be in error. The specimen with the large white tail marks, our probable male, is molting in the wings, as two of the remiges of the left wing are very short and basally are still enclosed in their sheaths from which they are expanding terminally.

#### FAMILY APODIDAE

##### *Apus niansae niansae* (Reichenow)

Two specimens of this swift were collected at the west base of Mt. Nyiru, June 24, one of each sex. They agree with a series from Mt. Moroto, north-eastern Uganda, and from Naivasha, Kenya. The above specimens were shot on the wing in the late afternoon when large numbers of swifts, presumably of this species, were feeding over the scrub forest at the west base to Mt. Nyiru.

#### FAMILY COLIIDAE

##### *Colius striatus kikuyuensis* van Someren

The speckled mousebird is one of the commonest birds of most of Africa; the present subspecies ranges from northern Tanzania north at least to Marsabit. In the Karissia Hills, June 2 and 3, a series of 4 males and 2 females was collected, all but 2 of which were marked as in breeding condition. Mousebirds of this species were exceedingly abundant in the Karissia Hills, but were absent in the Mt. Nyiru area, being replaced by the following species.

##### *Colius macrourus pulcher* Neumann

Two male blue-naped mousebirds were collected on the west base of Mt. Nyiru, June 26. Both had the gonads somewhat enlarged; one of the birds lacks the long rectrices, probably due to the shot. Mt. Nyiru appears to be an additional locality for this bird. Mousebirds were noted as relatively uncommon in the Mt. Nyiru area.

#### FAMILY TROGONIDAE

##### *Apaloderma narina narina* (Stephens)

Narina's trogon is a bird of the evergreen forest throughout much of eastern Africa, but its range is discontinuous because of the spotty distribution of suitable habitat. The expedition found it to be common in the Karissia Hills, where 5 male specimens were obtained between June 6 and 12. All the birds showed gonadal swelling. All of the above mentioned birds were located by their characteristic calls and no females were seen.



## FAMILY ALCEDINIDAE

*Halcyon chelicuti chelicuti* (Stanley)

This is one of the wide-ranging, common kingfishers of the open country of Africa. One adult female was obtained on June 7, 15 miles south of Maralal; the bird was in non-breeding condition.

*Halcyon leucocephala leucocephala* (Muller)

The gray-headed kingfisher occurs over much of Africa except in treeless areas. The expedition met with it on the west base of Mt. Nyiru, where one male with somewhat enlarged gonads was collected on June 23, and one non-breeding female on June 26.

## FAMILY MEROPIDAE

*Merops pusillus meridionalis* (Sharpe)

This is one of the ubiquitous birds of the open country of eastern Africa. In the plains area 15 miles south of Maralal the expedition collected one adult female on June 4. It showed slight gonadal development. We follow White (1965: 232) in merging the genus *Melittophagus* with *Merops*.

*Merops lafresnayei oreobates* (Sharpe)

The cinnamon-chested bee-eater is a bird of the bush country of Kenya, usually at altitudes of from 6000 to 8000 feet. It was common in the Karissia Hills where the expedition collected 2 adult males and 2 immature birds of each sex, on June 14 and 15. In the Karissia Hills this bee-eater was encountered only in heavy forest where it perched in numbers on the tops of large cedars along a stream course.

## FAMILY CORACIIDAE

*Coracias caudata caudata* Linnaeus

The lilac-breasted roller was met with in the open plains 15 miles south of Maralal on June 7 and 10, on each of which days one male was obtained. With the deep lilac color extending well down over the breast, these specimens are clearly typical *caudata* and show no variation in the direction of *lorti* of Ethiopia and northeastern Kenya, in which race that color is restricted to the chin and throat.

*Coracias naevia naevia* Daudin

The rufous-crowned roller is represented in the collection by an adult male taken on the west base of Mt. Nyiru, June 26. It had the testes slightly enlarged, and is in somewhat abraded plumage. This species is widely distributed over much of eastern Africa; Mt. Nyiru is an additional, but not surprising, "station" for it.

*Eurystomus glaucurus afer* (Latham)

The broad-billed roller is found over a good part of eastern Africa. One adult female specimen was collected in the Karissia Hills, on June 2. It was in non-breeding state.

## FAMILY UPUPIDAE

*Phoeniculus granti* (Neumann)

In calling our single, youngish, specimen *P. granti*, and not *P. purpureus granti*, we are conforming to the arrangement given by White (1965: 241). The present bird, a young male, taken in the plains area 15 miles south of Maralal, June 7, has the chin and throat dusky grayish fawn, and the black bill somewhat shorter (25 mm.) than birds in full adult plumage.

*Phoeniculus bollei jacksoni* (Sharpe)

This race of the white-headed kakelaar occurs in the highlands of Kenya west to the eastern Congo and north to the southern Sudan. The expedition obtained 5 male specimens in the Karissia Hills, June 2 to 12. Of these, 3 showed no signs of gonadal enlargement, one showed slight signs of it, and the last had no comment on its label.

*Phoeniculus minor cabanisi* (Defilippi)

This smallish kakelaar is a bird of the dry open country. The expedition collected one non-breeding male on the west base of Mt. Nyiru, on June 22. We follow White (1965: 243) in combining the genus *Rhinopomastus* with the broader *Phoeniculus*.

## FAMILY BUCEROTIDAE

*Tockus erythrorhynchus erythrorhynchus* (Temminck)

The red-billed hornbill has a wide range in the thorn bush country of Africa. The expedition collected 4 specimens on the west base of Mt. Nyiru, June 21 to 25; 2 adult males with somewhat enlarged testes, one female in non-breeding state, and 1 immature female. All the birds show signs of molt, especially in the tail, and all have some faded old feathers still present in the upperparts.

*Tockus deckeni* (Cabanis)

Von der Decken's hornbill is represented in the collection by a single non-breeding female collected on the west base of Mt. Nyiru on June 25. The rectrices are not yet fully grown and are still enclosed in their sheaths basally.

*Tockus jacksoni* O. Grant

Jackson's hornbill is not listed in White's 1965 check list, and it is to be assumed that he considered it the same as *deckeni*. One immature female was collected on the west base of Mt. Nyiru on June 25, apparently together with

the specimen of *deckeni* listed above. However, this bird has numerous conspicuous white spots on the upper wing coverts, which are absent in the otherwise very similar *deckeni*. The discussion of these two remarkably similar, sympatric species given in an earlier study (Friedmann, 1930, 420-425) still seems to be the most informative appraisal of them, and we prefer to follow the conclusions there reached, and since accepted by Mackworth-Praed and Grant (1957: 621).

*Tockus flavirostris flavirostris* (Rüppell)

The yellow-billed hornbill occurs widely in the acacia savannas of Kenya. Three examples were obtained by the expedition on the west base of Mt. Nyiru, on June 25, 2 males and 1 female, all with somewhat enlarged gonads. Both of the males show signs of active molt in the remiges. An adult male was observed actively feeding a nesting female in a dead snag in the center of our camp area. The bird would feed the sealed-in female several times a day and the food items were often noted as large green mantids. A young fledgling of this species was purchased alive from a Samburu warrior on June 26 at the Mt. Nyiru camp and kept as a pet. At the time the bird was acquired, it had its full complement of remiges, but no tail had developed.

FAMILY CAPITONIDAE

*Lybius lacrymosus lacrymosus* (Cabanis)

The spotted-flanked barbet, a common bird of much of Kenya and adjacent areas, was met with on the west base of Mt. Nyiru, on June 22 and 23, when 6 adults, 3 of each sex, were collected. We follow White (1965: 259) in considering the genus *Tricholaema*, formerly used for these birds, as part of *Lybius*.

*Lybius leucomelas diadematus* (Heuglin)

The red-fronted barbet was met with and collected at two localities: plains area 15 miles south of Maralal, June 4, one female with slight gonadal enlargement; west base of Mt. Nyiru, June 24 and 26, two females, one with some ovarian enlargement, the other not.

*Pogoniulus leucomystax* (Sharpe)

This little tinker-bird ranges from central Kenya south to south-central Tanzania. One female, in non-breeding state, was obtained in the Karissia Hills on June 6. It agrees with several from Tanzania in size and coloration. The Karissia Hills must be near the northern limit of the range of this bird.

*Pogoniulus pusillus affinis* (Reichenow)

The red-fronted tinker-bird is represented in the present collection by 1 male and 5 females, all taken in the Karissia Hills, June 2, 3 and 4. The

locality is an additional, but not a surprising, "station" for this tiny barbet, which has an extensive range in the dry bush and acacia country of Kenya. These small barbets fed extensively on a red-berried mistletoe in the Karissia Hills area.

*Pogoniulus bilineatus jacksoni* (Sharpe)

This race of the golden-rumped tinker-bird occurs in the highlands of Kenya, chiefly west of the Rift Valley. Two adult specimens, one of each sex, were collected in the Karissia Hills on June 15. These examples agree with *jacksoni*, not with *alius*, the form found in the areas east of the Rift Valley in Kenya, although the difference between the two is slight.

*Trachyphonus darnaudii bohmi* Fischer and Reichenow

This race of Darnaud's barbet, characterized by having the crown plain black with no terminal orange or red spots on the feathers, ranges farther to the west in northern Kenya than the statements of either Mackworth-Praed and Grant (1957: 735-736) or White (1965: 273) indicate. The present series of 4 specimens from the west base of Mt. Nyiru, June 25 and 26, are clearly *bohmi* and not typical *darnaudii*. The birds collected were in non-breeding condition, and are in somewhat abraded plumage.

*Trachyphonus erythrocephalus versicolor* Hartlaub

This subspecies of the red and yellow barbet, characterized by the yellow forehead and superciliary stripes, is represented in the collection by one adult male, taken on the west base of Mt. Nyiru on June 23. It was in non-breeding condition and is in a molting stage, especially noticeable on the chin and throat.

FAMILY INDICATORIDAE

*Indicator variegatus* Lesson

The scaly-throated honey-guide is treated binomially to conform with White's list (1965: 274). It is represented in the present collection by one adult male taken in the Karissia Hills on June 3. The bird had the testes considerably enlarged, and is in fairly worn plumage. White is correct in saying that the dimensional characters by which *jubaensis* is characterized form a cline, but this in itself is not impossible of subdivision as the smaller form is, as far as known, a coastal and subcoastal population. Further studies may yet reestablish the usefulness of this racial recognition.

*Indicator indicator* (Sparrman)

The greater honey-guide was met with in the Karissia Hills, June 3, when a non-breeding female adult in good plumage was collected. The species is widely distributed over most of sub-Saharan Africa. Greater honey-guides



were noted as common in the Mt. Nyiru area and although no specimens were saved as skins, two specimens were liquid preserved for anatomical studies.

*Indicator minor minor* Stephens

The lesser honey-guide is widely distributed over much of Africa. One adult, non-breeding female was collected at the west base of Mt. Nyiru on June 22. The specimen is without a head, as that part was preserved in spirits for anatomical study of the olfactory tract.

FAMILY PICIDAE

*Campethera nubica nubica* (Boddaert)

The Nubian woodpecker, a common bird in most parts of Kenya, was collected on the west base of Mt. Nyiru, on June 24; one adult male, with enlarged testes, and two adult females with slight gonadal development.

*Dendropicos fuscescens hemprichii* (Ehrenberg)

Two specimens of the cardinal woodpecker are referred to the subspecies *hemprichii*. They are a non-breeding adult female taken 15 miles south of Maralal on June 4, and an adult male (by plumage, although marked female on the label) collected on the west base of Mt. Nyiru, June 26. The reason for calling them *hemprichii* and not *lepidus* is because they have the mantle very distinctly barred, and have little (male) or no (female) greenish or yellowish on the mantle and the underparts. Judging by the maps of the ranges of these two races in Mackworth-Praed and Grant: 1957: 762, 763) Mt. Nyiru must be about where the two come together. In their dimensions (wing 80 in the male, 84 mm. in the female), they are large for *hemprichii* and less than the average for *lepidus*.

*Dendrocopos obsoletus ingens* (Hartert)

The little brown-backed woodpecker is represented by one adult female taken in the Karissia Hills, on June 2. It is in very worn plumage but has some new feathers coming in on the upperparts. This is one of the less frequently observed and collected of the east African woodpeckers, although it is widely distributed in the acacia and bush country. Karissia Hills is a new locality for it.

*Thripias namaquus schoensis* (Rüppell)

This race of the bearded woodpecker, characterized by having the black marking of the auriculars extending postero-ventrally so that it separates the white malar stripes from the white post-ocular area, ranges from Ethiopia to northern Kenya and west to the Ubangi-Shari area. Two specimens were obtained, as follows: Karissia Hills, June 3, one male adult; west base of Mt. Nyiru, June 24, one male. Both of these constitute additional, but not surprising locality records.

## FAMILY ALAUDIDAE

*Mirafr africanaoides intercedens* Reichenow

One specimen of this widely distributed lark was obtained in the Karissia Hills on June 12, a male with fairly large testes. The bird is darker, deeper chestnut on the auriculars, top of head, and the upperparts generally, and with more extensive blackish fuscous centers on the dorsal feathers, than in most of the comparative material examined, but is approached fairly closely by another male from Kajiado, Rift Valley, Kenya. The Karissia Hills bird is lacking some of its tail feathers, probably as a result of the shot as it shows no sign of molting.

*Eremopteryx leucopareia* (Fischer and Reichenow)

Fischer's sparrow-lark ranges from northern Kenya south across Tanzania, in fairly dry open country. One female, ovary slightly enlarged, was collected in the Karissia Hills, on June 10.

## FAMILY MOTACILLIDAE

*Motacilla alba vidua* Sundevall

One example of the African pied wagtail, an adult male with fairly large testes, was collected in the Karissia Hills, on June 19. This is a common, wide-ranging bird over much of Kenya.

*Anthus leucophrys* subsp.

One male example of this pipit was obtained in the Karissia Hills, on June 12. The single specimen obtained is immature and is not fully grown. It is, therefore, not identifiable to subspecies. According to Hall (1961: 262), the races *zenkeri* and *goodsoni* intergrade just west of the Karissia Hills. It is possible that the present specimen should be considered as *goodsoni*, but to label it so would give it a definiteness that might prove misleading. We are indebted to M. A. Traylor of the Field Museum of Natural History for his opinion on our bird and for comparing it with material in the van Someren collections under his care.

## FAMILY TIMALIIDAE

*Turdoides plebejus cinereus* (Heuglin)

Four specimens of the brown babbler were taken in the Karissia Hills on June 12, one adult male with fairly large testes, one female in breeding condition, and two young females.

*Argya rubiginosa rubiginosa* (Rüppell)

The rufous chatterer is represented in the collection by two males, in non-breeding state, taken on the west base of Mt. Nyiru on June 24.

## FAMILY PYCNONOTIDAE

*Pycnonotus barbatus tricolor* (Hartlaub)

The common, ubiquitous yellow-vented bulbul was collected in the Karissia Hills, on June 3 and 4, three adult males and two adult females, all in non-breeding condition. In calling these birds *tricolor*, and not *fayi*, we are following White (1962: 74), who considers the latter name a synonym of the former. The Samburu district is in the area where *tricolor* and *dodsoni* intergrade.

*Phyllastrephus fischeri placidus* (Shelley)

This race of Fischer's greenbull inhabits highland forests from Marsabit south across central Kenya and Tanzania to northern Mozambique. It was found to be common in the Karissia Hills, where a series of six adults, three of each sex, were collected June 8 to 14. The birds showed some to very great gonadal enlargement.

*Nicator chloris gularis* Hartlaub and Finsch

The east African race of the nicator was met with in the Karissia Hills, where an adult male with greatly enlarged gonads was collected on June 6. The specimen shows signs of active molting in the tail; the plumage of the anterior underparts is much abraded.

## FAMILY MUSCICAPIDAE

*Muscicapa adusta interposita* (van Someren)

Three examples of this race of the pygmy flycatcher were obtained in the Karissia Hills, June 18 and 20, one non-breeding adult of each sex and one young bird.

*Melaenornis chocolatina fischeri* (Reichenow)

The white-eyed slaty flycatcher, here treated as a race of *Melaenornis chocolatinus* to conform with the arrangement of White (1963: 15), was common in the Karissia Hills, where one adult male with somewhat swollen testes, one female with slightly enlarged ovary, and three non-breeding females were collected June 2 to 12. The male is in very worn plumage; the females vary somewhat in the degree of feather abrasion, but are in better plumage than the male.

*Melaenornis pammelaina* (Stanley)

The shining black flycatcher is represented in the collection by six specimens from two localities, as follows: west base Mt. Nyiru, June 24 to 26, one non-breeding adult male and two adult females; Karissia Hills, June 8 and 12, one adult male and one adult female both with somewhat swollen gonads, and one immature female still in the spotted plumage.

*Bradornis microrhynchus* Reichenow

One of these small grayish flycatchers was obtained on the west base of Mt. Nyiru, on June 26. It was sexed as a female, but with a query. It is in fairly fresh plumage.

*Bradornis pallidus subalaris* Sharpe

The pale flycatcher was met with on June 16 when one adult female and one unsexed young bird were collected 5 miles south of Maralal. The female was laying, and had a large ovum in it.

*Batis molitor* (Hahn and Kuster)

The Kenya chin-spot flycatcher was collected in three localities, as follows: Karissia Hills, June 3 and 7, one of each sex with slightly enlarged gonads; 5 miles west of Maralal, June 16, one adult male, two adult females, all in non-breeding state; west base of Mt. Nyiru, June 26, one adult male with slightly swollen testes.

*Terpsiphone viridis ferreti* (Guerin)

This paradise flycatcher was obtained in two localities: on the west base of Mt. Nyiru, June 22, one non-breeding female; Karissia Hills, June 8 and 11, three non-breeding females.

## FAMILY TURDIDAE

*Cercotrichas leucophrys leucoptera* (Rüppell)

The white-browed scrub robin was met with on the west base of Mt. Nyiru where two males were collected on June 24 and 26. One had small gonads, the other showed some testicular swelling. White (1962) has combined *Erythropygia* with *Cercotrichas*, and we place the present species under the latter generic name to conform to his list.

*Cichladusa guttata rufipennis* Sharpe

The single specimen of the spotted morning warbler, obtained on the west base of Mt. Nyiru, June 22, agrees in coloration and in size with two from the lower Tana Valley, and is therefore placed with the race *rufipennis*. No examples of typical *guttata* have been available for comparison. Mt. Nyiru must be close to the meeting ground of the two races. The present example shows signs of molt, especially in the tail; it had the ovary slightly enlarged.

*Myrmecocichla aethiops cryptoleuca* Sharpe

The Kenya anteater-chat was collected in the Karissia Hills; one adult male with somewhat enlarged testes, June 19.

*Monticola rufocinerea rufocinerea* (Rüppell)

The lesser rock thrush was met with on Mt. Nyiru, when an immature



male was collected on June 23 and an adult of the same sex on June 27. We here follow White (1962: 120) in considering *tenuis* the same as typical *rufocinerea*, and find the present birds agree in tone of coloration with others from Mt. Moroto.

*Cossypha heuglini heuglini* Hartlaub

The white-browed robin chat is widely distributed over much of Eastern Africa. Six adults were obtained in the Karissia Hills, June 4 to 8, four males and two females; the birds vary in their gonadal development from not at all enlarged to fairly much so. In the case of one of the males, the testes were noted as black. In addition to these adults, one immature female was collected, in the same place, on June 4.

*Cossypha caffra iolaema* Reichenow

The Kenya robin-chat ranges from northern Mozambique to the highlands of Kenya and northwest to the mountains of southern Sudan. One young, unsexed specimen was taken on the west base of Mt. Nyiru on June 21.

*Turdus abyssinicus abyssinicus* Gmelin

This thrush is represented by one immature female and one adult male, taken on the crest of the Karissia Hills on June 20. The latter bird had enlarged gonads, and is in abraded plumage, possibly a bird that was about through with breeding for the season.

*Turdus pelios centralis* Reichenow

Two specimens of the Kurrichane thrush were obtained in the Karissia Hills, an immature female on June 6, and an adult, non-breeding female on June 12.

FAMILY SYLVIIDAE

*Apalis cinerea cinerea* (Sharpe)

Two adult males of the grey apalis were obtained in the Karissia Hills on June 20; one had the testes small, the other somewhat enlarged; both are in fairly worn plumage.

*Apalis flavida malensis* Neumann

This race of the poorly named black-breasted apalis is represented by one adult of each sex, taken in the Karissia Hills, June 6 and 7.

*Apalis porphyrolaema* Reichenow and Neumann

Two adults, one of each sex, of the chestnut-throated apalis were collected in the Karissia Hills, on June 20. Both showed only slight gonadal enlargement; the male is in molt, especially in the tail. These two birds, together with a male from South Kinangop Plateau, Aberdare Mountains, are very slightly

grayer, less tinged with brownish, above than others from Kaptagat Forest, Eldoret District, from Ol Kalow, and from Naro Maru, Mt. Kenya.

*Apalis rufifrons smithii* (Sharpe)

The red-faced apalis was met with in the plains area at the south end of Mt. Nyiru, where one adult male was taken on June 23. It showed slight gonadal enlargement, and is in somewhat worn plumage.

*Sylvietta whytii jacksoni* Sharpe

Two adults, one male, one female, of this race of the red-faced crombec were collected on the west base of Mt. Nyiru on June 22. Both specimens are somewhat abraded and were in non-breeding condition.

*Cisticola chiniana humilis* Madarasz

The Kenya highlands race of the rattling cisticola was met with in the Karissia Hills where an adult female was taken on June 2 and a male on June 8. The female had the gonads slightly enlarged, the male more so.

*Camaroptera brachyura griseigula* Sharpe

The Taita gray-backed camaroptera was very common in the Karissia Hills, where a series of seven males and three females was collected June 2 to 25. One of the females is a young bird and has the entire upperparts tinged with greenish, and the breast and upper abdomen obscurely streaked or clouded with greenish gray. The adults varied in the state of their gonads from not at all enlarged to fairly large.

*Camaroptera simplex simplex* (Cabanis)

Three adult male gray wren warblers were collected on the west base of Mt. Nyiru, June 22, 25 and 26, all in somewhat abraded plumage, and all with the testes somewhat enlarged.

*Eremomela icteropygialis griseoflava* Heuglin

One unsexed but adult yellow-bellied eremomela was collected in the plains area 15 miles south of Maralal on June 7. It agrees with the characters of *griseoflava*, but also suggests those of *abdominalis*, which race White (1962: 721) records from as far north as Archer's Post and Meru. It seems that the range given for *abdominalis* in Mackworth-Praed and Grant (1955: 432) should be extended northward a very considerable distance. Our present bird agrees with *abdominalis* in lacking the white supraorbital streak, and disagrees with the description of *griseoflava* in Mackworth-Praed and Grant, who write that from the chin to the upper abdomen the plumage is white or buffish white. Our present specimen has these parts pale purplish slate gray, and this appears to be the normal thing, not white as in their description.

## FAMILY HIRUNDINIDAE

*Psalidoprocne pristoptera massaica* Neumann

The black rough-winged swallow was met with in the Karissia Hills, June 3 to 15, when a series of 7 specimens, 3 males, 2 females, 2 unsexed, was collected. Three of these birds are molting in the wings and tail. In two the long rectrices are only partly grown, causing them to appear short-tailed, the depth of the fork being 12 and 15 mm., respectively, as opposed to 35 to 45 mm. in the others. These two birds are also slightly brownish, less deep black than the others, and may be immature birds.

## FAMILY CAMPEPHAGIDAE

*Coracina caesia pura* (Sharpe)

The gray cuckoo-shrike is a bird of the wooded highlands. Three male specimens were collected in the Karissia Hills on June 14; all had somewhat enlarged testes, black in color.

*Campephaga quiscalina martini* Jackson

One adult female of the purple-throated cuckoo-shrike was obtained in the Karissia Hills on June 19, a bird in non-breeding condition.

*Campephaga phoenicea flava* Vieillot

The black cuckoo-shrike was collected in two localities, as follows: Karissia Hills, June 14 and 18, one adult male with enlarged testes, and one immature female; Mt. Nyiru, June 22 and 26, two adult females with small ovaries.

## FAMILY DICRURIDAE

*Dicrurus adsimilis divaricatus* (Lichtenstein)

This drongo is one of the common birds of the east African bush country. One adult female, in non-breeding condition, was collected in the Karissia Hills on June 12. It is in molt in the wings (outer remiges), it appears to be fully adult but has narrow white tips on the under tail coverts, recalling the immature plumage to that extent, but not elsewhere.

## FAMILY LANIIDAE

*Nilaus afer minor* Sharpe

The Somali brubru was met with on Mt. Nyiru, where two adults, one of each sex, were collected on June 24 and 26; both birds were in non-breeding condition.

*Dryoscopus gambensis malzacii* (Heuglin)

This puff-back, characterized by its grayish scapulars and relatively heavy mandible (as compared with *D. cubla*), is represented in the collection by

one adult male with somewhat swollen testes and one non-breeding adult female, both taken in the Karissia Hills, June 6 and 14. The female may have been wrongly sexed as it is just as dark blue black above as the male, not earth-brown as described by Mackworth-Praed and Grant (1955: 620).

*Tchagra jamesi jamesi* (Shelley)

The three-streaked tchagra occurs in northern Kenya north to Ethiopia and Somalia. One adult female, in non-breeding state, was collected on the west base of Mt. Nyiru, June 24.

*Tchagra australis emini* (Reichenow)

This race of the brown-headed bush-shrike, somewhat darker brown above than *T. a. minor* (specimens seen from Nawisha and Kapenguria), was collected in the Karissia Hills, June 3 and 6, where one breeding female and one non-breeding male were taken. The Karissia Hills must be close to the northeastern edge of the range of the race. White (1962: 21) does not even include Kenya in its range, although listing Uganda; Mackworth-Praed and Grant (1955: 626) do record it from western Kenya.

*Tchagra cruenta hilgerti* (Neumann)

The Somali rosy-patched shrike was fairly numerous at the west base of Mt. Nyiru, where two adults of each sex were collected June 23, 24 and 25. All the birds had the small, resting gonads of the non-breeding season.

*Laniarius ferrugineus ambiguus* Madarasz

The boubou shrike was very common in the Karissia Hills, where six adults, three of each sex, were obtained June 2 and 3. One of the males and one of the females were in full breeding condition; the others were not.

*Laniarius funebris* (Hartlaub)

The slate-colored boubou shrike was common on Mt. Nyiru, June 21-26, when seven examples were collected; one immature female molting into adult plumage, three adult females, one adult male, and two unsexed adults. One of the females had the ovary enlarged, the others and the male had small gonads.

*Malaconotus sulfureopectus similis* Smith

Two examples of the sulphur-breasted bush-shrike, one of each sex, were taken in the Karissia Hills, June 4 and 6. This is a widely distributed species in Kenya.

*Lanius dorsalis* Cabanis

One specimen of the Teita fiscal was obtained in the plains area 15 miles south of Maralal, on June 7; an adult male with slightly enlarged testes. The bird is in worn plumage but is molting, especially in the tail. This shrike is



widely distributed in Kenya but tends to be local and hence very uneven in its local status.

*Lanius collaris humeralis* Stanley

The long-tailed fiscal is represented in the collection by one adult male taken in the Karissia Hills, June 15. The bird had the testes slightly enlarged.

FAMILY PARIDAE

*Parus albiventris* Shelley

The white-breasted tit occurs in forested areas, scrub, and bush country. Three examples were obtained, as follows: Karissia Hills, June 6, one adult male with enlarged testes; 5 miles west of Maralal, June 16, one adult of each sex with slightly enlarged gonads.

FAMILY CORVIDAE

*Corvus rhipidurus* Hartert

One adult male of the fan-tailed raven was collected 25 miles south of Baragoi, June 21, a bird in non-breeding condition.

*Corvus albicollis* Latham

The white-necked raven is represented in the collection by one adult female, non-breeding state, taken on the west base of Mt. Nyiru on June 22. The bird has an abnormal bill, apparently due to a mishap sometime prior to its death, giving it almost a small, narrow casque on the base of the culmen.

FAMILY ORIOLIDAE

*Oriolus larvatus rolleti* Salvadori

The black-headed oriole was common in the woodlands of the Karissia Hills where a series of six specimens was collected, June 2 to 18; three adult males with enlarged gonads, one adult female with somewhat swollen ovary, and one immature bird of each sex. The last two have the breast streaked with black, the chin and throat streaked black and yellow. The adults have red bills, the immature ones black. One of the adults shows sign of molt in the wings. Several occupied nests were noted in the large fever trees at the Karissia Hills camp.

FAMILY STURNIDAE

*Lamprotornis chalybeus cyaniventris* (Blyth)

The blue-eared glossy starling is a common bird in much of Kenya. Five specimens were collected, as follows: plains area 15 miles south of Maralal, one adult female in non-breeding state, two immature females, June 4; west base of Mt. Nyiru, one immature male, June 24, and one adult female, June 27, ovary not enlarged.

*Cinnyricinclus leucogaster verreauxi* (Bocage)

The violet-backed starling is represented in the collection by two males taken in the Karissia Hills, June 11. One is in full adult plumage, the other is molting into the adult feathering.

*Spreo superbus* (Rüppell)

The superb starling was very common in the areas visited by the expedition. In the plains area 15 miles south of Maralal, June 4 to 7, three adult males, one immature male, and two adult females were obtained; in the Karissia Hills one immature male was collected on June 12. In addition, three adult males were collected at the west base of Mt. Nyiru on June 27. One adult female was also obtained with them.

*Creatophora cinerea* (Menschen)

The wattled starling, a well-known bird of much of Africa, was collected as follows: plains area 15 miles south of Maralal, June 7, one adult female with slightly enlarged gonads; June 12, one adult male with swollen testes; Karissia Hills, June 12, one adult male with large testes. The wattles are well developed in the Maralal male, not in the other.

*Buphagus erythrorhynchus* (Stanley)

The red-billed ox-pecker is represented in the collection by four examples, as follows: Karissia Hills, June 12, one adult female; west base of Mt. Nyiru, June 24, one adult male with somewhat enlarged gonads; also two adult males were taken on the west base of Mt. Nyiru June 27, one with small and the other with enlarged testes.

## FAMILY NECTARINIIDAE

*Anthreptes collaris garguensis* Mearns

This race of the collared sunbird is represented by two adult males and one adult female, taken in the Karissia Hills, June 7 to 19. None of the birds was in breeding condition.

*Nectarinia amethystina kirkii* (Shelley)

One adult of each sex of the amethyst sunbird was collected in the Karissia Hills, June 11 and 18.

*Nectarinia venusta falkensteini* (Fischer and Reichenow)

The Kenya buff-breasted sunbird was taken at two places, as follows: Karissia Hills, June 12 and 18, one adult of each sex; west base of Mt. Nyiru, June 26, one adult male; all in non-breeding state.

*Nectarinia preussi kikuyuensis* Mearns

This race of the double-collared sunbird is represented by three speci-

mens, two adult males and one adult female, all taken in the Karissia Hills, June 15 to 20.

*Nectarinia mariquensis osiris* Finsch

The mariqua sunbird was extremely common on the west base of Mt. Nyiru, June 22 to 25, where a series of five adult males, one immature male, and three adult females was collected. The immature male is molting into adult plumage. Two of the females have the chin and middle of the throat solid blackish; the other has these areas, as well as the upper and lateral parts of the abdomen, streaked with blackish.

FAMILY ZOSTEROPIDAE

*Zosterops senegalensis jacksoni* Neumann

Jackson's white-eye was very numerous in the Karissia Hills, where a series of seven adult females was obtained June 6 to 14. The absence of males in this series is puzzling as usually the sexes are found together in the same loose flocks during the non-breeding season. All the hens collected had small gonads, and were non-breeding birds.

FAMILY PLOCEIDAE

*Ploceus baglafecht reichenowi* (Fischer)

One example of this wide-ranging weaver was obtained in the Karissia Hills, June 8, an adult male with somewhat enlarged testes.

*Ploceus velatus uluensis* (Neumann)

The masked weaver was met with on the west base of Mt. Nyiru, where one male, almost, but not quite, in adult plumage, was collected on June 27.

*Ploceus melanogaster stephanophorus* (Sharpe)

One adult female of this black-billed weaver was collected in the Karissia Hills, on June 14; it had the ovary slightly enlarged.

*Malimbus rubriceps leuconotus* (Muller)

The red-headed weaver was collected in two places, as follows: Karissia Hills, June 12, one adult male with somewhat swollen gonads; west base of Mt. Nyiru, June 22, one immature male.

*Dinemellia dinemellii dinemellii* (Rüppell)

This noisy, conspicuous weaver was met with 25 miles south of Baragoi, where two adult females were collected on June 21.

*Plocepasser mahali melanorhynchus* Bonaparte

The black-billed sparrow-weaver was common on the west base of Mt.

Nyiru, where four adult females and one immature female were collected on June 22 and 24. The specimen marked as immature is similar to the adults.

*Pseudonigrita arnaudi arnaudi* (Bonaparte)

The gray-headed social weaver is represented in the collection by three examples, as follows: plains area 15 miles south of Maralal, June 7, one adult, non-breeding female; June 17, one adult male with somewhat enlarged testes; Karissia Hills, June 11, one adult male with somewhat swollen gonads.

*Passer iagoensis rufocinctus* Finsch and Richenow

Two examples of the Kenya rufous sparrow were collected in the plains area 15 miles south of Maralal, a female on June 4, and a male on June 7; both birds showed slight gonadal enlargement. The male is in very abraded plumage.

*Petronia xanthocollis pyrgita* (Heuglin)

The yellow-spotted petronia is represented in the collection by one adult, non-breeding male, taken in the Karissia Hills on June 12.

*Estrilda paludicola paludicola* Heuglin

This rather local waxbill was found in the Karissia Hills on June 20 when two non-breeding females were collected. In Kenya this species is found only in the more western half of the country; the Karissia Hills may be close to the eastern limit of its range.

*Estrilda ianthinogaster* (Reichenow)

The Kenya grenadier was common on the west base of Mt. Nyiru, where four examples were taken June 22 and 24; two adult males in non-breeding state, one immature male, and one non-breeding adult female.

*Estrilda bengala bengala* (Linnaeus)

The red-cheeked cordon-bleu is represented in the collection by two adults, both with large gonads, taken in the Karissia Hills, June 8. The female had a large developing egg.

FAMILY EMBERIZIDAE

*Emberiza flaviventris kalaharica* Roberts

One adult male, taken in the Karissia Hills on June 4, represents this bunting. It is in fairly worn plumage.

*Emberiza tahapisi tahapisi* Smith

The cinnamon-breasted rock bunting was met with on the west base of Mt. Nyiru on June 25 when an adult male with slightly swollen gonads was collected.



## FAMILY FRINGILLIDAE

*Serinus sulphuratus sharpii* Neumann

One adult female brimstone canary was collected 5 miles west of Maralal on June 16. It had a slightly enlarged ovary.

*Serinus striolatus striolatus* (Rüppell)

The streaky seed-eater is represented in the collection by one adult, non-breeding female, taken in the Karissia Hills, June 20.

*Serinus reichardi striatipectus* (Sharpe)

Three adult females of this seed-eater were obtained on the west base of Mt. Nyiru, June 25; one had the ovary enlarged, the other two did not.

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